

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

HARUHISA SODA et al.

Application No.: Unassigned

Filed: Herewith

For: Optical Switch, Directional Coupler  
Type Optical Modulator With Traveling-Wave  
Electrode, And Optical Communication  
System

Examiner: Unassigned

Art Unit: Unassigned

INFORMATION DISCLOSURE STATEMENT  
UNDER  
37 CFR §1.97 and §1.98

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Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of the references are enclosed. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Respectfully submitted,



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Substitute for form 1449A/PTO  <h2 style="text-align: center;">INFORMATION DISCLOSURE STATEMENT BY APPLICANT</h2> <p style="text-align: center;">(use as many sheets as necessary)</p>		<b>Complete if Known</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Application Number</td> <td>Unassigned</td> </tr> <tr> <td>Filing Date</td> <td>Herewith</td> </tr> <tr> <td>First Named Inventor</td> <td>Soda, Haruhisa et al.</td> </tr> <tr> <td>Art Unit</td> <td>Unassigned</td> </tr> <tr> <td>Examiner Name</td> <td>Unassigned</td> </tr> <tr> <td>Attorney Docket Number</td> <td>089991</td> </tr> </table>		Application Number	Unassigned	Filing Date	Herewith	First Named Inventor	Soda, Haruhisa et al.	Art Unit	Unassigned	Examiner Name	Unassigned	Attorney Docket Number	089991
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Attorney Docket Number	089991														
Sheet	1	of	2												

U.S. PATENT DOCUMENTS					
Examiner	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		
	AA	4,012,113		03/15/77	Kogelnik et al.
	AB	US-			
	AC	US-			
	AD	US-			
	AE	US-			
	AF	US-			
	AG	US-			
	AH	US-			
	AI	US-			
	AJ	US-			
	AK	US-			
	AL	US-			
	AM	US-			
	AN	US-			
	AO	US-			
	AP	US-			
	AQ	US-			
	AR	US-			
	AS	US-			
	AT	US-			

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)		
	AU					
	AV					
	AW					
	AX					
	AY					
	AZ					
	BA					
	BB					

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>Complete if Known</b>	
			Applicant Number	Unassigned
			Filing Date	Herewith
			First Named Inventor	Soda, Haruhisa et al.
			Art Unit	Unassigned
			Examiner Name	Unassigned
Sheet	2	of	2	Attorney Docket Number
				089991

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	BC	Prof. F. Koyama et al., entitled "Frequency Chirping in External Modulators," <i>IEEE Journal of Lightwave Technology</i> , Vol. LT-6, No.1, pp 87-93 January 1988		
	BD	Dr. R. C. Alferness et al., entitled "High-Speed Traveling-Wave Directional Coupler Switch/Modulator for $\lambda=1.32 \mu\text{m}$ ," <i>IEEE Journal of Quantum Electronics</i> , Vol. QE-19, No. 9, pp 1339-1341, September 1983		
	BE	Lucas b. Soldano et al., "Optical Multi-Mode Interference Devices Based on Self-Imaging: Principles and Applications," <i>Journal of Lightwave Technology</i> , Vol. 13, No. 4, pp 615-627, April 1995		
	BF	Dr. R.G. Waker et al., "Low-voltage, 50 ohm GaAs/AlGaAs Traveling-wave Modulator with bandwidth exceeding 25 GHz," <i>Electronics Letters</i> , 9 Vol. 25 No.23 pp.1549-1550, November 1989		
	BG			
	BH			
	BI			
	BJ			
	BK			
	BL			
	BM			

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